

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Applicant's or agent's file reference GEN-002 PCT | FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | |
| International application No. PCT/ EP 03/ 09689 | International filing date (day/month/year) 01/09/2003 | (Earliest) Priority Date (day/month/year) 30/08/2002 |
| Applicant GENEART GMBH | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.



None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/09689

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N15/86

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
IPC 7 C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, MEDLINE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| ✓ X | US 2002/090716 A1 (MEREDITH DAVID MARK ET AL) 11 July 2002 (2002-07-11) see p. 1, right column to p. 2 and claims --- | 1-12 |
| ✓ X | WO 01 60403 A (BOEHRINGER INGELHEIM VETMED ;ELBERS KNUT (DE); OSTERRIEDER NIKOLAU) 23 August 2001 (2001-08-23) see p. 6 --- | 1-12 |
| ✓ X | US 6 187 320 B1 (STRUBE WALTER ET AL) 13 February 2001 (2001-02-13) see column 8 --- | 1-12 |
| ✓ X | US 6 387 685 B1 (MEREDITH DAVID MARK ET AL) 14 May 2002 (2002-05-14) the whole document --- -/-- | 1-12 |

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

18 November 2003

Date of mailing of the international search report

12/12/2003

Name and mailing address of the ISA

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Paresce, D

INTERNATIONAL SEARCH REPORT

International Application No

PC 05P 03/09689

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| X | US 6 225 111 B1 (COCHRAN MARK D ET AL) 1 May 2001 (2001-05-01) see columns 2-3 | 1-12 |
| X | ROUMILLAT L F ET AL: "PERSISTENT INFECTION OF A HUMAN LYMPHOBLASTOID CELL LINE WITH EQUINE HERPESVIRUS 1" INFECTION AND IMMUNITY, AMERICAN SOCIETY FOR MICROBIOLOGY. WASHINGTON, US, vol. 24, no. 2, 1 May 1979 (1979-05-01), pages 539-544, XP002059120 ISSN: 0019-9567 the whole document | 1-8 |
| X | RUDOLPH JENS ET AL: "Equine herpesvirus type 1 devoid of gM and gp2 is severely impaired in virus egress but not direct cell-to-cell spread." VIROLOGY, vol. 293, no. 2, 15 February 2002 (2002-02-15), pages 356-367, XP002219690 February 15, 2002 ISSN: 0042-6822 see p. 356-7 | 1-8 |
| X | NEUBAUER ANTONIE ET AL: "Equine herpesvirus 1 mutants devoid of glycoprotein B or M are apathogenic for mice but induce protection against challenge infection" VIROLOGY, ACADEMIC PRESS, ORLANDO, US, vol. 239, no. 1, 8 December 1997 (1997-12-08), pages 36-45, XP002146619 ISSN: 0042-6822 see p.38-39 | 1-8 |

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-3, 5-12 partially

Present claims 1-3, 5-12 relate to an extremely large number of possible compounds/products/methods. In fact, the claims contain so many options, variables, possible permutations and provisos that a lack of clarity (and conciseness) within the meaning of Article 84 EPC arises to such an extent as to render a meaningful search of the claims impossible. Consequently, the search has been carried out for those parts of the application which do appear to be clear (and concise), namely a recombinant animal virus, said virus being an equine herpesvirus, having the ability to transduce primary cells in vitro with a multiplicity of infection of less than 1, said primary cells derived from organisms not being the natural host.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP 03/09689**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 1-3, 5-12 partially
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/09689

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|-------------------------------------------|----|---------------------|----------------------------|---------------------|
| US 2002090716 | A1 | 11-07-2002 | AU 735339 B2 | 05-07-2001 |
| | | | AU 7738798 A | 15-07-1993 |
| | | | EP 0953054 A1 | 03-11-1999 |
| | | | WO 9827216 A1 | 25-06-1998 |
| | | | GB 2335426 A , B | 22-09-1999 |
| | | | JP 2001506854 T | 29-05-2001 |
| | | | NZ 336047 A | 23-02-2001 |
| | | | US 6387685 B1 | 14-05-2002 |
| ----- | | | | |
| WO 0160403 | A | 23-08-2001 | EP 1129722 A1 | 05-09-2001 |
| | | | AU 4831301 A | 27-08-2001 |
| | | | BR 0108442 A | 25-03-2003 |
| | | | CA 2399846 A1 | 23-08-2001 |
| | | | CN 1400907 T | 05-03-2003 |
| | | | CZ 20022809 A3 | 15-01-2003 |
| | | | WO 0160403 A1 | 23-08-2001 |
| | | | EP 1259258 A1 | 27-11-2002 |
| | | | HU 0204446 A2 | 28-05-2003 |
| | | | JP 2003522542 T | 29-07-2003 |
| | | | US 2003198650 A1 | 23-10-2003 |
| ----- | | | | |
| US 6187320 | B1 | 13-02-2001 | DE 4110962 A1 | 08-10-1992 |
| | | | AT 187496 T | 15-12-1999 |
| | | | DE 59209773 D1 | 13-01-2000 |
| | | | DK 507179 T3 | 29-05-2000 |
| | | | EP 0507179 A2 | 07-10-1992 |
| | | | ES 2141093 T3 | 16-03-2000 |
| | | | GR 3032767 T3 | 30-06-2000 |
| | | | JP 3435574 B2 | 11-08-2003 |
| | | | JP 5207877 A | 20-08-1993 |
| ----- | | | | |
| US 6387685 | B1 | 14-05-2002 | AU 735339 B2 | 05-07-2001 |
| | | | AU 7738798 A | 15-07-1993 |
| | | | EP 0953054 A1 | 03-11-1999 |
| | | | WO 9827216 A1 | 25-06-1998 |
| | | | GB 2335426 A , B | 22-09-1999 |
| | | | JP 2001506854 T | 29-05-2001 |
| | | | NZ 336047 A | 23-02-2001 |
| | | | US 2002090716 A1 | 11-07-2002 |
| ----- | | | | |
| US 6225111 | B1 | 01-05-2001 | AT 244308 T | 15-07-2003 |
| | | | AU 683851 B2 | 27-11-1997 |
| | | | AU 4999193 A | 03-03-1994 |
| | | | CA 2141422 A1 | 17-02-1994 |
| | | | DE 69333074 D1 | 07-08-2003 |
| | | | DK 654089 T3 | 13-10-2003 |
| | | | EP 0654089 A1 | 24-05-1995 |
| | | | WO 9403628 A1 | 17-02-1994 |
| | | | US 5741696 A | 21-04-1998 |
| | | | US 5731188 A | 24-03-1998 |